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EDITORIAL

AMYOTROPHIC LATERAL SCLEROSIS

Amyotrophic lateral sclerosis is a motor-system disease of adult life characterized by muscular atrophy (amyotrophy) and sclerosis of the lateral columns of the spinal cord. The course is progressive and uniformly fatal. Approximately 100 cases are seen every year at the Mayo Clinic, so that although the disease is uncommon it is not rare. There is a high incidence of the disease on Guam and on the other Marianas Islands, where among the Chamorros about 1% of adults are affected at any one time and about 10% of deaths of adults are stated to be due to this cause. In a symposium held at the Mayo Clinic recently many aspects of this interesting disease and its incidence and geographical distribution were considered.

It has taken many years for the various neuromuscular diseases to be separated from one another since the time in 1850 when Aran first described progressive muscular atrophy, considering it a primary disease of muscle, and in 1865 when Charcot first recognized that in some patients suffering from this disease there was associated sclerosis of the lateral columns of the spinal cord. The concept of amyotrophic lateral sclerosis has broadened so that motor-neurone disease includes this syndrome, progressive muscular atrophy, and progressive bulbar palsy. Confusion still exists, but newer techniques such as electromyography are helping to establish order.

The disease occurs rarely before 30 years of age and affects men twice as commonly as women. In a number of countries the incidence rate and the death rate are about 1·4 per 100,000 population per year, and the prevalence ratio about 4-6 per 100,000 population; but in the Chamorro population of the Marianas Islands it is about 100 times as prevalent as elsewhere. The disease is also highly prevalent among Chamorros who have settled in California. It is suggested that there is a genetic mechanism involved but that in most cases the gene is inherited without manifestation of the disease. Females may have some modifying or protective

VAN DIE REDAKSIE

AMIOTROFIESE LATERALE SKLEROSE

Amiotrofiese laterale sklerose is 'n siekte van die motoriese senuweestelsel by volwassenes wat gekenmerk word deur spierverswakking (-verskrompeling) en sklerose van die systrenge van die rugmurg. Die siekteverloop is progressief en is altyd dodelik. Ongeveer 100 gevalle word jaarliks by die Mayo-kliniek gesien; die siekte is dus ongewoon dog nie seldsaam nie. Die siekte kom baie dikwels op Guam en die ander eilande van die Mariana-groep voor, waar omtrent 1 persent van die volwasse Chamorro's op enige gegewe tydstip aan hierdie aandoening ly, en dit word beweer dat omtrent 10 persent van die sterfgevalle onder volwassenes daaraan te wyte is. Baie aspekte van hierdie interessante siekte, sy voorkomssyfer en geografiese verspreiding, is onlangs in 'n samespreking aan die Mayo-kliniek behandel.

Dit het baie jare geneem om die verskillende senuweespiersiektes van mekaar te onderskei sedert die jaar 1850 toe Aran vir die eerste maal progressiewe spierverskrompeling beskryf het (hy het gemeen dat dit primêr 'n spiersiekte was), en die jaar 1865 toe Charcot vir die eerste keer waargeneem het dat daar 'n meegaande sklerose van die systrenge van die rugmurg was by sommige pasiënte wat aan hierdie siekte ly. Die wetenskaplike opvatting van hierdie aandoening het al meer uitgebrei en vandag sluit motoriese senuweesiektes hierdie sindroom, sowel as progressiewe spieratrofie en progressiewe bulbêrverlamming in. Daar is nog steeds verwarring, maar die jongste metodes soos elektromiografie help om die wanorde reg te stel.

Die siekte kom selde vóór die ouderdom van 30 jaar voor en mans is tweemaal meer vatbaar as vrouens daarvoor. In 'n paar lande is die jaarlikse voorkomssyfer en sterftesyfer omtrent 1·4 uit 100,000 van die bevolking, en na verhouding kom dit jaarliks by 4-6 per 100,000 van die bevolking voor. By die Chamorro's van die Marianas kom dit egter honderd maal meer dikwels as elders voor. Hierdie siekte kom ook baie dikwels voor onder die Chamorro's wat hulle in Kalifornië gevestig het. Daar word aan die hand gedoen dat 'n genetiese meganisme daarby betrokke is maar dat die geen by die meeste gevalle oorgeërf word sonder om die siekte te veroorsaak. Moontlik het vrouens die een of ander versagtende of beskermende faktor wat die kliniese openbaring van die siekte voorkom selfs by dié wat die abnormale geen oorerf.

factor which prevents clinical manifestation of the disease even among those inheriting the abnormal gene.

Muscular atrophy with fasciculations, cramps and weakness is an early feature of the disease. The extrinsic muscles of the eye are apparently never involved. Classically, weakness begins in the small muscles of the hand, eventually involving the whole hand with flattening of the thenar and hypothenar eminences and wasting in the interosseous spaces. This weakness and atrophy observed in one hand may develop for months before the opposite hand shows signs of involvement. Other muscles become involved, for example in the shoulder girdle, and in some patients the weakness may actually begin in the lower limbs. Difficulty in moving the tongue heralds the onset of bulbar symptoms and in about a quarter of the cases may represent the original presenting complaint. With progressive involvement of striated muscles death ensues from aspiration pneumonia or mechanical failure of respiration, but sometimes apparently from involvement of the dorsal afferent nucleus of the vagus nerve, when death is sudden.

Involvement of the lateral or pyramidal tracts produces increased reflexes, spasticity and sometimes abnormal plantar reflexes. However, in only a few cases are spasticity or other evidences of lateral sclerosis found as the presenting complaint. Clinical evidence of involvement of the pyramidal tracts is often masked by the muscular weakness and atrophy. Impairment of the bladder is infrequent, and objective sensory impairment is not part of the clinical picture, although cramps in the muscles are a frequent complaint.

The diagnosis of amyotrophic lateral sclerosis is not difficult, especially when it presents in a man in the forties or fifties with widespread asymmetrical progressive muscular weakness, atrophy and fasciculation, and associated spasticity and increased reflexes.[1] The disease must be differentiated from other neurological disorders by the clinical findings, and the electromyogram will confirm the diagnosis.

In electromyography the electric activity of skeletal muscle is determined by a needle electrode inserted into the muscle. The activity is displayed on a cathode-ray oscilloscope and at the same time is translated by a loud speaker, so that simultaneous visual and auditory analysis is possible. In the diagnosis of amyotrophic lateral sclerosis it may briefly be stated that electromyographic support is obtained when fibrillation and fasciculation potentials occur in muscles of the limbs and the head, when there is reduction in number and increase in size of motor-unit action potentials, and when normal excitability of the remaining fibres of motor nerves and conduction velocity in them is within normal or not less than 75% of average normal value.

1. Symposium: Proc. Mayo Clinic (1957): **32**, 425.

Spieratrofie met bondeltrekkings, krampe en swakheid is 'n vroeë kenmerk van die siekte. Die buitenste spiere van die oog word blykbaar nooit aangetas nie. By die klassieke geval begin die swakheid in die klein spiere van die hand, en uiteindelik word die hele hand aangetas; die duim- en pinkbaluitsteeksels word plat en die spasies tussen die beentjies verval. Hierdie swakheid en verskrompeling wat by die een hand waargeneem word, kan maande lank voort ontwikkel voordat daar tekens verskyn dat die ander hand ook aangetas word. Dan word ander spiere aangetas, byvoorbeeld in die skouergordel—by sommige pasiënte begin die swakheid selfs in die onderste ledemate. As die pasiënt dit moeilik vind om sy tong te beweeg, beteken dit dat bulbêrsimptome ingetree het; by ongeveer 'n kwart van die gevalle kan hierdie verskynsel die oorspronklike presenterende klagte wees. Met die voortskrydende aantasting van die gestreepte spiere volg die dood op inasemingslongontsteking of meganiese asemhalingsversaking; soms volg dit egter op aantasting van die dorsale toevoerende kern van die swerfsenuwee, en dan tree die dood skielik in.

Aantasting van die laterale of piramiedgange veroorsaak verhoogde reflekse, spastisiteit en soms abnormale voetsoolreflekse. Spastisiteit of die ander openbarings van laterale sklerose word egter slegs by 'n paar gevalle as die presenterende klagte aangetref. Die kliniese bewyse van aantasting van die piramiedgange word dikwels verbloem deur die spierswakheid en verskrompeling. Die blaas word nie dikwels belemmer nie en objektiewe belemmering van die gevoelsenuwees is nooit deel van die siektebeeld nie, hoewel pasiënte dikwels oor spierkrampe kla.

Dit is nie moeilik om amiotrofiese laterale sklerose te diagnoseer nie, veral nie wanneer dit voorkom by 'n veertig- of vyftigjarige man met algemeen verspreide, oneweredige toenemende spierswakheid, verskrompeling en fibrillasie, met gepaardgaande spastisiteit en verhoogde reflekse nie.[1] Hierdie siekte moet onderskei word van ander senuweesiektes deur middel van die kliniese bevindings, en die elektromiogram sal die diagnose bevestig.

By elektromiografie word die elektriese aktiwiteit van die skeletspier vasgestel deur 'n naaldelektrode wat in die spier gesteek word. Die aktiwiteit word weergegee op 'n katodestraalossilloskoop en word terselfdertyd vertolk deur 'n luidspreker, sodat sigbare en hoorbare ontleding van die gegewens gelyktydig moontlik is. By die diagnose van amiotrofiese laterale sklerose kan dit kortliks gemeld word dat elektromiografiese hulp verkry word as fibrillasie en bondeltrekkings-veranderings voorkom in die spiere van die ledemate en die kop, wanneer daar 'n vermindering in aantal en vermeerdering in die grootte van die aksievermoë van die motoriese eenheid is, en wanneer die gewone prikkelbaarheid van die oorblywende vesels van motoriese senuwees en die geleidingspoed in hulle binne normale perke is, of nie minder as 75 persent van die gemiddelde waarde is nie.

1. Samespreking: Proc. Mayo Clinic (1957): **32**, 425.

EXFOLIATIVE CYTOLOGY AND THE ALIMENTARY TRACT

For many years the technique of exfoliative cytology has been applied to the diagnosis of carcinoma of the cervix uteri[1]; superficial mucosal cells, obtained by aspiration from the vagina, are examined for signs of malignancy. More recently the method has been adapted to the study of other mucosal surfaces, especially those of the gastrointestinal tract.[2] Techniques have been devised that enable cells to be obtained from the oesophagus, stomach, duodenum and colon.

The accuracy of oesophageal studies is very high; Klay-

man[3] reported that malignancy was correctly diagnosed in 19 out of 20 cases, and that no errors were made in any of their 20 patients with benign lesions. The method is also proving useful in the investigation of carcinoma of the colon beyond the reach of the sigmoidoscope.[4] Duodenal cytological examinations are less reliable, but occasionally a small carcinoma in the pancreatico-biliary system may be detected.[5]

It is in the diagnosis of gastric carcinoma that cytology is likely to be most valuable; in several centres in the United States it has been found to give better results than gastroscopy. The technique is 'blind'; a Ryle's tube is introduced into the stomach and vigorous lavage of the whole organ is carried out with a saline solution. It has been found that lavage provides as good a yield of cells as abrasion of the suspected area with a brush or balloon. The best preparations are obtained when the mucin coating the stomach is destroyed by chymotrypsin added to the lavage solution.[6] The material is aspirated, iced and centrifuged, and smears are made and fixed as soon as possible.

It is not only in malignant disease that cytological examination provides interesting information. Characteristic changes have been described in squamous cells obtained from the gastro-intestinal tracts of patients with pernicious anaemia;[7] cells having similar appearances have been found in the colon in cases of ulcerative colitis.[8,9]

The difficulties of distinguishing neoplastic from regenerating cells are very great, especially as the cells have to be examined as individuals and the usual pathological criteria of invasiveness cannot be applied. Considerable training and experience are required before a cytologist can express a reliable opinion; interestingly enough, in the United States many cytologists are technicians without medical training.[1] In spite of the many pitfalls in the method, the undoubted successes of exfoliative cytology demand that the technique be more widely available in this country.

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The Secretary of the Medical Association of South Africa, the Editor of the South African Medical Journal, and the other members of the head office staff of the Association, extend hearty Xmas greetings to all members of the Association and all readers and supporters of the Journal, and wish them a happy and prosperous New Year.

Die Sekretaris van die Mediese Vereniging van Suid-Afrika, die Redakteur van die Suid-Afrikaanse Tydskrif vir Geneeskunde, en die ander lede van die hoofkantoorpersoneel van die Vereniging, stuur hartelike Kersgroete aan alle lede van die Vereniging, en alle lesers en ondersteuners van die Tydskrif, en wens hulle 'n gelukkige en geseënde Nuwejaar toe.

YOU AND YOUR DOCTOR*

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Consultant General, The World Medical Association

During the past 11 years it has been my privilege to visit many countries of the free world. I have flown the Atlantic Ocean 55 times, and on one occasion encircled the globe in 8 weeks, visiting 16 countries, and travelling 32,500 miles. I mention these facts simply to underline the opportunities which have been given to me to meet people, and particularly the doctors, in a great many parts of the world. This is my first visit to South Africa, but by no means my first opportunity to become acquainted with many of your doctors, whom I have met at international conferences on a number of occasions. I am happy to tell this assembly that in the eyes of the world your medical profession occupies a high place. Your standards in medical education and medical care compare favourably with those of any other land with which I am familiar. The calibre of your doctors as measured by standards of efficiency, capability, and devotion to the highest principles of medical ethics, should be a source of pride and satisfaction to the people whom they serve. I am delighted to have this opportunity of paying my tribute to the doctors of South Africa.

The Medical Association of South Africa and the Canadian Medical Association have for some years enjoyed relations of affiliation one to the other and both to the British Medical Association, and I know that my colleagues in Britain and Canada would wish me to extend sincere felicitations to all the people of South Africa, which I most gladly do on this occasion.

For a short time this evening I wish to discuss with you two very important people—you, and your doctor. Perhaps you may be saying to yourselves at this very moment, 'What does he, a total stranger to South Africa, know about me and my doctor?' I hope I can answer this question to your satisfaction. To begin with, you—and I mean each one of

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you—are the most important person in the world. Self-respect, a sense of purpose in life, an appreciation of the art and joy of living, a deep consciousness of the challenge to perform life's tasks to the best of one's ability—all of these things add up to the preeminent position which you, and you alone, must occupy in your own mind and which, I repeat, makes you the most important person you know. You may not have thought of yourself in these actual words but, I assure you, your doctor has. You see, your doctor by training, by instinct, and by the fact that you choose him to share in the most secret and sacred of human relationships, is always prepared to dedicate himself, his talents and his skills to you, putting aside all considerations of personal gain, aggrandisement or comfort. In all the concepts of human relationship there is nothing quite like the relationship between you and your doctor—nothing which so completely exemplifies mutual trust, confidence and respect, and certainly nothing, so far as the doctor is concerned, which so completely demands dedicated service and a clear conscience that he is, to the best of his ability, endeavouring to provide you with health care of the highest possible standard. And you, of course, are entitled to nothing less.

I dare say that there is nothing new or startling in the statement I have just made. I should now like to continue with the thesis in a territory with which, I feel sure, most of you are much less familiar. You know yourself and your doctor; may I now multiply you and your doctor by the number of people and doctors in the world and take you on a brief excursion into the problems and the plannings which have engaged the attention of the medical profession, particularly during the past 10 years.

THE WORLD HEALTH ORGANIZATION AND THE WORLD MEDICAL ASSOCIATION

After the close of World War II the Allied Nations, as you are aware, set up the United Nations Organization (UN) in a meeting in San Francisco in 1945. The first specialized agency to be established by the UN was a world body to represent medicine. This was done in the summer of 1946, when an international conference was called in New York, attended by representatives of more than 62 nations, who for 5 weeks sat down together to plan the establishment of the World Health Organization. It was my privilege on that occasion to represent Canada, and there I met some of the outstanding medical leaders from your country and other lands. A great deal of time and thought was necessarily put into the establishment of this new body, and it was finally decided that the objectives of the organization might be crystallized in one statement, namely, 'To assist all mankind to attain to the highest possible level of health'. The record of the World Health Organization since its inception has indeed been a most creditable one, and I am reminded at this time of the part which outstanding members of the medical profession from your country have played in its operations. I am thinking particularly of Dr. Harry Gear, who as associate to the Director-General has rendered very signal and notable service since he joined the WHO.

In the autumn of 1946 the British Medical Association invited national medical associations throughout the world to send delegates to London to discuss the advisability of organizing a world medical body. This action was taken for two main reasons: firstly, between World War I and World War II, there had existed an international medical association, based largely in Europe, called the *Association Professionnelle Internationale des Médecins*, and including a dozen national medical associations. Secondly, during World War II BMA House in London became the mecca for medical officers from many lands, and the seeds were sown for an international medical body to be formed when hostilities should cease.

Thirty-five national medical organizations, of which I am happy to say your country and mine were two, sent delegates to London in September 1946. These representatives carefully examined the proposal and unanimously agreed that there was a place for a world medical body. Indeed the conference went further and said that with the founding of the World Health Organization by the United Nations, it seemed not only wise but essential that the doctors of the world should be in a position to speak with a united voice. And so an organizing committee was appointed and was given a year to draft the constitution and by-laws for the World Medical Association. In September 1947, in Paris, appropriately chosen because it had been the home of the old APIM, 125 doctors from 48 national medical associations met for a week, and with a unaniminity similar to that manifested in London in the previous year, adopted the report of the organizing committee and launched the World Medical Association for the following purposes:

1. To promote closer ties among the national medical organizations and among doctors of the world by personal contact and all other means available.
2. To maintain the honour and protect the interests of the medical profession.
3. To study and report on the professional problems which confront the medical profession in the different countries.
4. To organize an exchange of information on matters of national interest to the medical profession.
5. To establish relations with, and to present the views of the medical profession to the World Health Organization and other appropriate bodies.
6. To assist all peoples of the world to attain to the highest possible level of health.
7. To promote world peace.

Careful and realistic review of the foregoing objects will show that the general programme of the new organization encompassed all the avenues of approach and activity which would be likely to assist the medical profession in their endeavours to guard the health of mankind everywhere on the face of the globe. As you will see, you and your doctor, multiplied throughout the world, were envisaged as playing integral parts in this movement. And thus an idea, which had become known to many forward-looking doctors as an ideal, was translated into a body into which a spark of life was breathed, and it was pushed out into the world with the blessing and high hopes of its founders, but facing nevertheless a somewhat precarious future because of lack of funds.

In 1947 the world was not far removed from World War II, which had devastated many countries and left many others financially impoverished or, to say the least, 'hard up'. Accordingly, the annual subscription was set at the very modest sum of 10 Swiss centimes per member, a global assessment which if paid in full would produce less than

$40,000 a year—indeed a very small sum of money for a world body to do very much work on throughout the world. But, happily, the delegates from the American Medical Association had anticipated the financial difficulties which might be encountered and came to the Paris meeting with an offer of help which, one may say without fear of contradiction, not only saved the World Medical Association from inanition but made possible to a large degree the accomplishments to which the association may point with satisfaction and pride as a beginning in what is hoped will be a long and useful contribution to the welfare of mankind.

In brief, our American colleagues and some of their lay friends said they were willing to provide $50,000 a year for 5 years to finance a secretariat, the travelling expenses of the members of council for 2 meetings a year, and the publication of an association bulletin or journal. And here let me say, 10 years later, that our American friends not only kept their promise but more than doubled it, and have during the past decade provided the association with a sum of money not far short of $1,000,000.

One has often heard the question asked, 'Why have the Americans been so generous in financially backing the World Medical Association? What do they hope to get out of it?' I myself, while visiting a country that we shall leave nameless, was asked by the Minister of Foreign Affairs, 'Why are you here?' I replied that the World Medical Association was interested in doing anything that it could to assist the medical profession to improve the health of the people. He countered, 'Oh yes, but what is the *quid pro quo*, what do you doctors hope to get in return?' It is difficult apparently for some people to believe that mankind can perform services for its fellow men without some equivalent personal gain. Our American friends, to their everlasting credit, have one objective, and that is to assist in raising health standards throughout the world. It may not be inappropriate to say that perhaps they stand to gain as little as any country in the world from the activities and accomplishments of the association. However, I repeat, they are most anxious to see the World Medical Association equipped to serve all mankind, and what they are giving is essential in keeping the association actively alive.

Shortly after the meeting in Paris in 1947 a head office was established in New York City, with Dr. Louis Bauer, a past-president of the American Medical Association, installed as Secretary-General. Organization proceeded apace, and to the original list of 26 founder members new ones were added, until today the association includes 55 national medical associations, with a membership in excess of 750,000 doctors. The association holds two meetings a year—a council meeting in the spring and a general assembly in the autumn. During the past 10 years it has met in many parts of the world, moving about like a shuttle in order that the greatest possible number of doctors may have an opportunity to attend its meetings and become familiar with its aims and objects, and may further have opportunities for fraternization in an atmosphere which permits medicine with its unique and singularly vital and common denominator to strengthen the ties of international understanding and goodwill.

WHAT THE WORLD MEDICAL ASSOCIATION HAS DONE

The association, very early in its existence, codified and strengthened the ethical standards of medicine by promulgating a modified Hippocratic oath known as the Declaration of Geneva, and an international code of medical ethics, which have been furnished to doctors throughout the world, and which today are accepted by doctors and medical students everywhere as guiding lights to keep the medical profession constantly conscious of its ethical position. More recently the association has represented the profession in relation to proposals to the World Health Organization and other agencies, in drafting an international code of medical law which would be effective in the event of world conflict breaking out again. This we hope and pray will never be the case, but it is only wise for us to be prepared for any eventuality.

The association has vigilantly protected the legal and social status of the profession against the threat of oppressive laws or regulations which would destroy the basic conditions of good medical practice under social-security schemes in various countries. It has encouraged the profession to take a more active part in the political life of the nation, always remembering that the politician has the power to change, alter or modify, and sometimes to threaten, the practice of medicine. History reveals that too frequently the advice of the medical profession has not been sought or has not been heeded by the politician in framing so-called health legislation. The history of the medical profession throughout the world gives very clear and convincing proof that your doctors have never advanced legislation of a selfish or unsocial nature. Indeed, medical legislation has always been of the type which has kept in view the best interests of *you*, and therefore, again, you and your doctor are working harmoniously and happily together. If the doctor suggests that a certain law is wrong or if he on the other hand suggests that a certain law is right, please be assured that he is doing it in your interests.

The association has surveyed health and medical-care conditions in a large number of nations, thus making available facts and statistics which have been very valuable in comparative studies of health planning. Supplementary surveys continue to be made, all of which are calculated to be helpful to national medical associations in making their contributions to improve health standards and health care in their own countries.

The association promotes medical research not only in laboratories but in all fields in which the profession labours, keeping in mind the great discoveries that may, and sometimes do, come from the most unexpected sources, and realizing that every physician should be encouraged to regard himself as a research worker, always eager to observe new facts or check those advanced by others. The association is always on the alert to make available opportunities for postgraduate medical study.

The association has kept a careful eye on hospital facilities around the world, health practices, the importation of drugs, medical advertising, and the effect of social-security regulations on medical practice. Again, much of this information, which hitherto had not been available to the medical profession in many parts of the world, is proving effective in

assisting the profession to provide health care of the highest standard.

The association publishes the *World Medical Journal*, a bi-monthly medical publication in three languages—English, French and Spanish. It is the only world-wide medium specifically developed to disseminate information in all of these languages, and it is available at a small cost to individual doctors all over the world.

The association closely observes and reports on the activities of other international organizations engaged or interested in various aspects of health or dealing with any projects affecting the practice of medicine in peace or war. Not only do these other bodies welcome the advice and cooperation of the World Medical Association, but such collaboration has made it abundantly clear that it would be regrettable indeed if the profession were not organized adequately to offer its advice and observations on an international basis. As Dr. Hugh Clegg, the distinguished editor of the British Medical Journal, has said, 'If there were not a World Medical Association one would surely have to be invented'. The association held the first world conference on medical education in London in 1953, when more than 600 doctors from 92 universities and medical schools in 59 countries met together to discuss the broad subject of undergraduate medical education. The proceedings were published in several languages and were received throughout the world as a document which will be extremely valuable to medical schools everywhere in raising and improving the standards of medical education for their students. The second world conference on medical education will be held in Chicago in 1959—the topic being 'Medicine—a lifelong study'. The foregoing are a few of the outstanding activities and projects in which the World Medical Association has been engaged. Some may feel that not enough has been accomplished, that the association is as yet unknown to far too many people, that it is difficult for some member countries to find tangible evidence within their own borders that membership has been worth while. One can understand such questioning, but it must be remembered that, while the world is growing smaller metaphorically because of the contributions of science, it is still a large world with tremendous diversification of peoples, languages and problems.

THE FUTURE

The medical profession throughout the world faces the future fully persuaded that the achievements of the first 10 years of its international body are but a prelude to what can be done, that the association will continue to grow in strength and usefulness, and that its advice and its voice will be sought and heeded with increasing respect and effectiveness throughout the world. Future generations of doctors will say with sure conviction, when speaking of the World Medical Association, that it has been a marvellous thing for the profession, and of course this in the final analysis must mean that it has been a marvellous thing for the people whom the doctors serve.

One is frequently asked 'Why the two bodies, the World Health Organization and the World Medical Organization? Do they overlap?' Not at all; the World Health Organization is an inter-governmental body incorporating the national departments of health of the countries belonging to the United Nations, while the World Medical Association is a voluntary body, being a federation of all the national medical associations of the world who wish to join, including, I am happy to say, your own association, and the one from which I come. One, of course, is complementary to the other. One has often said that the World Medical Association is to the World Health Organization what electric power is to an electric transmission line. One is the vehicle, the other provides the power and, indeed, it is a matter of great satisfaction to the World Medical Association that it has found an opportunity on many occasions to demonstrate with the World Health Organization the value of team play. When one thinks of the early post-war years with their vast problems of malnutrition, venereal disease, tuberculosis, malaria, trachoma, schistosomiasis, and so many other things which were killing people by the hundreds of thousands, one realizes how stupendous were the opportunities and the necessity for medical team work. During the past 10 years great strides have been made in eradicating many of these diseases and giving millions of people an opportunity to live in health and strength. But much yet remains to be done. One-third of the world's population is without adequate food and without adequate medical care. One-third of the world's population has a mean expectation of life of not more than 30 years. One-third of the world's population has a *per capita* income of less than $50 a year. Millions of people are still dying with diseases which can be cured; as illustrations one merely has to mention malaria, yaws, tuberculosis and leprosy. We know now that there is enough ability and scientific knowledge if brought properly to bear upon these diseases to wipe them off the face of the earth. Surely mankind, which hates war, which hates destruction, which hates death of an untimely or improper character, will be eager to gird its loins and through whatever reasonable avenues are open to it make determined efforts to rid the world of those things which destroy life. War on disease is more important than any other kind of war and is likely to be more satisfactory in its results.

Your doctors here in South Africa are taking their full share of responsibility in these world-wide enterprises. Indeed, in the World Health Organization you have been extremely well represented; and may I remind you again that your Medical Association is a founder member of the World Medical Association and through that organization is playing a notable part in demonstrating man's humanity to man in accordance with the highest traditions of the medical profession. We in medicine have a tremendous responsibility to you, the people. We feel that we owe it to you to keep you well informed of your problems, and how we are attempting to meet them and solve them. You and your doctor together have an opportunity to give further expression to those qualities of heart and mind, which under the guidance of a benevolent Providence may yet see the people of this world resolving their difficulties and living at peace one with another, and may that day come soon.

It has been a great pleasure and privilege for me to have this opportunity to speak to you on the mutual problems of you and your doctor, and I hope that what has been said will give you some comfort in realizing that your medical profession along with their colleagues throughout the world are mindful of the health needs of man and are doing their best to meet them.

POTT'S PARAPLEGIA

REPORT OF EIGHT PATIENTS TREATED BY ANTERO-LATERAL DECOMPRESSION OF THE CORD

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With the decrease in the number of tubercular infections of the spine, the incidence of paraplegia is falling. Modern conservative treatment by means of immobilization and chemotherapy has further reduced the number of patients with tuberculous spondylitis who develop neurological abnormalities and many paraparetics and paraplegics have recovered on this treatment. Despite these advances, cases of Pott's paraplegia still occur and the purpose of this papes is to evaluate 8 cases of Pott's paraplegia in which the patientr were operated on by the method of antero-lateral decompress sion of the spinal cord.

Historical Note

Hippocrates (quoted by Svien *et al.*[1]) observed that drainage of abscesses along the spinal column frequently resulted in cure of the accompanying paralysis of the legs.

In 1779 Percival Pott[2] wrote his classical monograph entitled 'Remarks on that kind of palsy of the lower limbs which is frequently found to accompany a curvature of the spine and is supposed to be caused by it together with its method of cure'. He advocated the introduction of irritants to produce discharging 'suppuration from underneath the membrana adiposa'.

In 1896 Chipault (quoted by Griffiths *et al.*[3]) first performed laminectomy for this condition. His results were very bad. More recent attempts at these posterior decompressions were also unfortunate.

In 1894 Menard (quoted in the same work[3]) devised a technique—a costo-transversectomy—in which the inner end of a rib together with the transverse process is resected and thus the paravertebral abscess is evacuated. The results were satisfactory when pus was present but were unfortunately marred by secondary infection.

In 1933 Capener[4] devised an approach that would deal with a solid as well as a fluid compressing agent acting on the cord. In his lateral rhachiotomy he removed the inner ends of one or two ribs, the transverse process, the pedicle and half the lamina. The result in the case quoted by Seddon was satisfactory.

Alexander[5] and Dott[6] in 1946 and 1947, discussed the results in a series of 13 cases of Pott's paraplegia which they had treated by the antero-lateral decompression operation. The results were very impressive.

ANTERO-LATERAL DECOMPRESSION

Indications for Operation

In the series here described the indications for antero-lateral decompression were considered to be those set down by Dott,[6] as follows:

(*a*) A rapidly progressive paraparesis which is advancing daily and is nearing total paralysis.

(*b*) The case in which paraparesis advances over weeks or months in spite of effective fixation and postural correction.

(*c*) The chronic case in which even a slight or moderate paraparesis develops and persists in spite of adequate fixation and postural correction.

(*d*) Those cases in which adequate fixation is made impossible by spontaneous spasm of the paretic muscles.

Griffiths *et al.*[3] agree with the above indications and suggest the following as additional absolute indications for decompression:

(*a*) Complete loss of power for one month despite adequate conservative treatment.

(*b*) Severe paraplegia—e.g. paraplegia in flexion, flaccid paraplegia, complete sensory loss or complete loss of motor power for 6 months or more.

They also advise the following as relative indications:

(*a*) Recurrent paraplegia.

(*b*) Paraplegia in the elderly.

(*c*) Painful paraplegia, where the nerve roots are involved.

(*d*) Complications such as urinary infection and urinary stones.

Operative Procedure

Under general anaesthesia, with the use of an orotracheal tube, the patient lies prone in an anterior brace or plaster bed. If the lesion is in the upper thoracic region, a skull traction apparatus is applied to assist in stabilizing the spine during and after the operation.

A semi-elliptical skin incision is employed, starting and ending at the mid-line, centred on the apex of the kyphos. The skin flap having been reflected as far as the mid-line, the trapezius, latissimus dorsi and rhomboids are incised in the midline and reflected laterally. The erector spinae group of muscles are now detached from the ribs and reflected medially. The 3 or 4 ribs which now appear in the centre of the field are cleared with rongeurs and sectioned with a rib cutter at the lateral aspect. The sectioned ribs are then cleared medially as far as the heads and removed. The transverse processes are next nibbled away. The intercostal nerves are isolated, encircled with tapes and used as guides to the intervertebral foramina.

The next step consists in defining and nibbling away the pedicles and it is usually at this stage that caseous material or pus is encountered emanating from a cavity in the body of a vertebra. By means of gouges and a dental drill the cavity in the bodies of the collapsed vertebrae making up the internal gibbus is enlarged, fluid pus is sucked away and the anterior aspect of the theca is exposed. A variable amount of granulation and solid tissue is dissected away in the process. Once the decompression is effected, the

TABLE I

Case	Date of Operation	Level	Motor Paralysis	Sensory Loss	Sphincter Disturbance	Onset of Signs	Duration of Signs	Conservative Treatment	Result of Operation	Remarks
1. K.M. C.F. age 22	17 Oct. 1952	D 2-4	Complete Spastic	Complete	Incontinent	2 weeks	5 months	Unsatisfactory 3 months then Halifax traction and immobilization 2 months	Complete recovery	Pleura accidentally opened. Skull traction used. Spine fused later.
2. J.H. N.M. age 62	18 Nov. 1952	D 8-9	Complete Flaccid	Complete	Incontinent	Sudden	4 weeks	Negligible	Partial recovery of power. Bladder controlled. Spino-thalamic sensation recovered, joint sensation absent.	Despite neurological improvement, later X-rays showed extension of disease. Died 1 year later of pyelonephritis.
3. C.T. E.F. age 11	13 July 1955	D 9-12	Complete Spastic	Complete	Incontinent	Unknown	7 years	3 years strict in hospital	Bladder controlled. Walked out of hospital.	Early return of movement. Spine fused later.
4. L.R. C.F. age 9	(*a*) 1 Aug. 1955 (*b*) 19 Jan. 1956	D 9-11	Complete Flaccid	Not determined	Incontinent	Unknown	Uncertain—over years	4 years strict in hospital	(*a*) None. (*b*) Some improvement.	Uncooperative. Assessment very difficult
5. S.S. C.M. age 13	16 May 1956	D 8-10	Left leg complete Some movement at right knee and ankle	Complete	Incontinent	Unknown	2 years	2 years strict in hospital	Bladder controlled. Right limb good. Left beginning to move a year later. Spino-thalamic sensation recovered, joint sensation absent.	Gross osteoporosis. Fractured both tibiae and fibulae 10 months after operation.
6. L.C. C.M. age 11	3 Aug. 1956	D 5-8	Complete. Flexor spasms	No loss	Incontinent	Paraplegia recovered on conservative treatment; then slow relapse	4 months	4 months strict	Bladder controlled; some urgency. No flexor spasms. Slight motor improvement.	Regression of motor power after original recovery. No sensory loss.
7. S.J. C.F. age 25	26 Nov. 1956	D 7-12	Complete Flaccid	Complete	Incontinent	Sudden	5 weeks	2 weeks	Immediate improvement. Full neurological recovery.	Onset of neurological symptoms on old Pott's spine 3 days before delivery of a child. Spine fused later.
8. H.M. C.M. age 25	24 Dec. 1956	D 2-10	Complete Spastic	No loss	Partially incontinent	Rapid deterioration over a few days	4 years partial, 9 months complete	Prolonged during last 4 years	Some improvement in power.	Re-activation of pulmonary tuberculosis soon after operation and despite treatment died in sanatorium 2 months later.

theca tends to lose its angulated appearance and sags into the decompressed area. When one is satisfied that the decompression is satisfactory, the wound is closed in layers, chromic catgut being used for the muscle layers and silk for the skin.

The patient is nursed on posterior and anterior shells or braces. Streptomycin and INH are continued post-operatively. After 2-3 months a spinal graft is usually deemed necessary.

Table I gives the clinical details of the 8 cases in this series.

Results of Operation

Good Recovery. Three patients (K.M., C.T. and S.J.) made a good recovery. Before operation all were paraplegic, with complete loss of sensation and incontinence of urine. They have now had spinal grafts and have been discharged. K.M. is working in a factory, C.T. attends school and S.J. is able to look after her home and family.

Some Recovery. Three patients (L.R., S.S. and L.C.) have made some progress. Assessment of L.R. is very difficult because she is most uncooperative. S.S. has regained bladder control, the poor power in the right leg has now become good, and the paralysed left leg shows slight movement. Sensation to pinprick has returned but joint sensation is absent. His recovery has been complicated by pathological fractures of both tibiae and fibulae due to osteoporosis. L.C. has benefited as he can now control his bladder and the troublesome flexor spasms have completely subsided. Improvement in motor power has been only slight. Sensation has never been affected.

Mortality. Two patients (J.H. and H.M.) have died since the operation. Both patients recovered from the operation and, neurologically, some improvement occurred. J.H. was convalescing in another hospital when he developed a pyelonephritis thought to be of a tuberculous nature. X-rays of the spinal column showed extension of the spinal disease despite neurological improvement. He died 1 year after operation of pyelonephritis. H.M. developed pulmonary signs soon after the operation and X-rays showed reactivation of pulmonary tuberculosis. He was transferred to a sanatorium, but despite treatment, died of this disease.

DISCUSSION

The history of a sudden onset of paraplegia does not necessarily mean that the patient will not improve with surgery. Cases J.H. and S.J. developed paralysis suddenly and were operated on 4 weeks and 5 weeks later. Notwithstanding the complete and prolonged disruption of conduction, some improvement occurred in case J.H. and an excellent result in S.J. It is considered that in these two cases the deterioration was caused by compression and not by a vascular thrombosis. Nevertheless, a sudden onset of paraplegia is suggestive of vascular thrombosis and urgent operation may be the only means of effective treatment.

The development of paraplegia in the final stages of pregnancy, as in case S.J., is interesting. It is thought that it is coincidental in this case, for an undoubted compressive lesion was found and the symptoms were not improved after delivery of the child.

Unlike the description of cases treated before the advent of streptomycin, in none of these cases was a sizeable collection of pus found. Whilst one cannot deduce much from this small series, it does suggest that modern conservative treatment may prevent pus formation. On the other hand, this finding strongly suggests that the cause of obstruction is usually solid and that a costo-transversectomy would be unlikely to relieve the pressure. In 4 cases a sequestrated disc was found.

All the cases were treated post-operatively by intensive anti-tuberculous medications with streptomycin and PAS or INH; yet 2 cases, J.H. and H.M., developed a flare-up of the infective process post-operatively, producing an extension in spinal disease in J.H. and reactivation of pulmonary tuberculosis in H.M.

The results indicate the importance of cooperation between the neurosurgeon with the orthopaedic surgeon. Whilst the orthopaedic surgeon usually cares for the case of Pott's paraplegia and is later called upon to decide on the necessity for a spinal graft, the neurosurgeon is more familiar with the exposure and decompression of the spinal canal.

Further, it is considered that a competent anaesthetist, aware of the possible dangers of the operation, is essential for success.

SUMMARY

1. Eight patients with Pott's paraplegia were operated on by the method of the antero-lateral decompression. Of these, 3 made a good recovery, 3 showed some improvement and 2 died later of tuberculosis.

2. The indications for the operation and the operative procedure are described.

3. A short historical note is included.

My thanks are due to Prof. J. H. Louw, head of the Division of Surgery, and to Mr. H. de Villiers Hammann, head of the Department of Neurosurgery, Groote Schuur Hospital, for their encouragement in the treatment of these cases and to the Orthopaedic Surgeons—Prof. C. Lewer Allen, Mr. A. Singer and Mr. J. J. Commerell—for referring the cases for treatment.

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ADDENDUM

Since this article was written, a further case has been operated on:

G.P., a Coloured man, aged 22, who had a spinal kyphos for 11 years, developed weakness of the limbs which progressed to complete paraplegia, complete sensory loss below D11, and retention of urine. As this complication developed whilst the patient was in a spinal jacket, operation was decided upon.

On 31 October 1957 an antero-lateral decompression was performed, 12 days after the onset of the complete paraplegia. On the following day movement in the left foot was definite and in the right foot suggested. Pin-prick sensation was perceived. The following day he had full control of his bladder and definite movement in both lower limbs. Within a week, only proprioceptive loss was found.

THE PROBLEMS OF AGING*

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More people are living longer than in any previous era. This biological phenomenon, with important social implications, is especially evident in cultural areas where there is a public interest in health problems, improved living conditions, and effective methods for disease control and good sanitation.

Scientific progress in the first half of the 20th century has resulted in a marked reduction in infant and maternal mortality rates. With a clearer understanding of nutritional needs and the benefits of stress control, more individuals are living longer; of more significance is the maintenance of energy and vitality into the higher years of human life.

Problems of aging, biologically, include for the most part, degeneration of the vascular and nervous systems and neoplasia. Evidence is accumulating that many common maladies may likewise be brought under control within the next decade. The result of this new knowledge will be a further extension of the human life span.

While old age for increasing numbers is inevitable, it should be accepted as a natural period of extended years which may include new experiences. The extension of maturity by maintenance of physical activity, the avoidance of exhaustion and the stimulus of specific motivation delays tissue deterioration, which is ordinarily the result of disease, disuse and atrophy. The later years should offer opportunity for growing up, in addition to growing old.

In the United States, the most recent census indicated that over 14 million Americans are 65 years of age and over, and the number is increasing every year. This phenomenon is already causing impressive repercussions in many phases of our national life. Since the dawn of the 20th century, there has been a substantial reduction in infant and maternal death rates. With improved living conditions in homes and at work, better sanitation and some increase of interest in healthy living, there is retention of buoyancy and vitality, in numerous cases, far beyond the threescore year and ten limit.

Problems of aging, while they have their own peculiarities, nevertheless cannot be isolated from the broad sweep of the human life span. Old age is not a separate part of existence, a postscript, as it were. In truth, it is a continuation which is now being added, thanks to the dividends of scientific discovery. This business of living cannot be divided into hard and fast compartments. Rather we need to catch the rhythm of human existence, a progression as it were, from one period of growth and development extending, as time passes, into the next broader phase of experience. Timing and progression need be kept in mind, for there appears to be a schedule of changes and experiences, each an occasion of the period. From birth, infancy and childhood, on through the entire life span, there are potentials, physiological, psychological and social, which attend to each period. Patterns of progressive training and behaviour are fairly well charted for the early years and on, until middle age is upon us. Basic needs for the first half of life are moderately well known. The later years period, thus far, has been uncharted territory.

* A paper read in plenary session at the South African Medical Congress, Durban, September 1957.

Insidious and detrimental factors may appear about the age of 35 or 40 and become more evident as time passes. With increasing responsibilities, a diminution of physical activity with an increase of body weight with its accompanying sluggishness takes place and there occurs at the cellular level an accumulation of fatigue toxins and overloading of the metabolic fire with a decrease in physical activity. Thus, sluggishness of the organism develops.

This approach to health and development has so far not been emphasized in the medical course. Yet it is the heart of biological growth and development. The key to normal psychological growth to optimum maturation is found as an individual grows from one year to the next, adding to reserves and experiences.

The human body has an amazing self-repair mechanism. When exposed to injury or insult, reparative forces spring into instant action for repair. This protective mechanism, when not too badly abused, maintains its alertness far into the advanced years. Exhaustion results from overloading, and atrophy occurs from disuse. Given half a chance, and modest protection, a great many 'nuisance disorders' can be avoided. In this way, by side-stepping the disturbances which occur as the result of imperfections of physical and mental well-being, the body and nervous system can apparently carry on, nobody really knows how long.

We are coming to realize, however, that it may be possible to live a century or more in a healthy and vigorous way, with a responsiveness of the nervous system and an alert mind, all of which adds up to a longer and happier human life. With experimental animals, by a diet limited in calories, plus exercise, it is possible to just about double their life span. The happier result for these animals is that they retain their sleekness of coat, brightness of eyes and sexual potency.

Life is prolonged when the afflictions, infections and deteriorations which destroy life are avoided.

TRENDS IN MORTALITY

If one examines the vital statistic tables of the past 5 years compared with those at the turn of the century one finds that the degenerative diseases now constitute the major threats to long life. The disorders of the vascular system—heart disease, hardening of the arteries, hypertension, coronary occlusion, stroke and thrombosis—destroy approximately 800,000 lives in America each year. Second in occurrence is cancer, and this disease killed some 224,000 in 1955. Then there are the other diseases, accidents, and injuries; nephritis, diabetes and pneumonia—tuberculosis has gone down in the list recently. In these groups we find the major illnesses of patients in the higher years of life.

A great deal can be done for sufferers from these conditions, and important researches are being continued in these various fields. As more individuals are living into the later years of life, more are living long enough to become candidates for these 'wear and tear' disorders. Added to these specific diseases there is the accumulation of the residual of various

insults and traumas to the tissues of the body in the early years of life. These unfavorable conditions existing in the body in the aggregate set the stage for a long-term illness which shortens the life of the individual.

BODILY CHANGES WITH AGING

Certain changes take place in the body with the passage of time. Man ages. What takes place depends upon the quality of the tissues, that is, the hereditary endowment of the individual plus the many experiences that occur as the individual grows. The life span may be divided into conception, growth, development, maturation and involution. The various infectious disorders, accidents, stresses and strains, faulty nutrition, and the alterations in speed of function, all have an influence on the balance of the cells' activity. Just what makes up the undiluted experience of the cell in pure aging, aside from the deleterious external influences that are brought to bear upon this cell, has not been clearly identified. The early experiences of an individual from the time of birth through the infancy, childhood, and early adult periods are fairly fixed epochs in the life span of the individual. The vigor of the middle and the higher years of life depends to a great deal on the experiences that the cells of the body have as they move along.

Biological homeostasis appears to be fairly stable throughout the entire adult life span. For example: first, the acid-base equilibrium of the blood remains remarkably constant and shows no unusual excursions in the later years of life. Second, the blood-sugar level may increase slightly in the later years although it remains likewise within the normal for homeostatic balance. Third, absorption of vitamin A is constant throughout life. Fourth, the eosinophil response to corticotropin does not change. Fifth, the ability to retain the nitrogen when given an increased amount of protein by mouth remains constant. This valuable observation was pointed out by Shock.

It has been recorded that aging cells show a diminished amount of protein. This is a constant finding in cells that have not received adequate nourishment and may be a very significant observation.

Aging seems to be a process of gradual running down of the basic power of the individual. There is a progression of unfavorable changes occurring in tissues which may, in the majority of cases, ultimately become irreversible. But these alterations have not been universally observed. With the unfavorable progressive changes in the tissues there is a loss of functional reserve.

It has been stated that the main characteristics of aging, in man, are atrophy of the tissues. Here the deleterious changes occur at various times and at different rates and in different organs. As the oxygen supply to the tissues decreases, the number and size of the cells also decrease. If there is an increase in the supply of oxygen to the cells produced by moderate exercise, this deleterious effect may be diminished or delayed. Ultimately, with insufficient activity of the cells, they shrink in size and, with the inadequate quantity of oxygen, there is a gradual and partial replacement of specialized cells of the various organs by less differentiated tissue. That is to say, in the liver, in the heart, in the brain, and other organs, like the bone marrow, there is an increase in the connective tissue.

A deposit of the lipochrome pigments in the cells, with calcium occurring in the cartilages, has been noted. As the tissues age they become drier and denser. As the density of the tissue increases there are organic and inorganic inclusions and the tissue colloids become more concentrated. As the tissues become dry the nitrogen content decreases.

It is important to grasp the significance of these changes. No adequate checks have been made to determine whether or not any or all of these deteriorations might be influenced by diet, exercise, and more balanced living. It has been thought for some time that the aging of tissues is accelerated by any prolonged increase in stress which has been permitted to go to the stage of exhaustion.

C. S. Davidson believes that elderly persons tend to lose interest in eating and they eat food rich in starches and sugar and poor in proteins. There is then a deficiency in the protein supply to the body and obviously there would be less protein found in the cells. This may be a factor in accelerating the aging process.

In his classic essay on old age, 'The Major Involution,' Warthin divides the primary tissue changes of involution into 4 parts: (1) Numerical atrophy of cells, (2) quantitative atrophy, (3) shrinking and condensation of intracellular substance and (4) vascular changes with collapse of blood vessels and calcification.

Secondary Pathological Conditions associated with Aging

Warthin has listed a number of tissue alterations that are common in the body of an aging person. Individuals show loss of memory and loss of self-control, with eccentric behavior. There are numerous clinical evidences of senile decay of the nervous system. The eye shows an arcus senilis with cataract and loss of visual acuity. Changes in hearing and changes in thyroid function have been recorded. In the heart and the blood vessels there is less elasticity and smoothness of the lining of the blood vessels, with resulting disorders of heart function, coronary occlusion, and generalized hardening of the arteries. In the lung a shrinkage of the tissues takes place, with loss of air-functioning vesicles due to lack of use. Other tissues of the body—the kidneys, the liver, the prostate, the pancreas, and the bones—all show definite deterioration in the structure of the cells. With this deterioration loss of satisfactory function is inevitable.

Defective Tissue Repair

Tissue culture today is being carried on in many experimental laboratories. It is known that cells and various tissues may be kept in a state of good physiological balance for many, many months. Connective-tissue cells and many other cells may be maintained in a state of active mitotic growth for years as was originally shown by Alexis Carrel.

Inability of the tissues to repair themselves satisfactorily in aging bodies has been the subject of consideration in the minds of many thoughtful investigators. They have an impression that collections of waste elements and the other products in the plasma and the liquid elements of the body maintain such a concentration of deleterious materials that tissue replacement and self-renewal cannot take place as effectively and as completely in older bodies as in younger. Here again the influence of diet, exhaustion, exercise and various other influences have not been adequately evaluated.

This is a field which promises much important information when the experiments can be carried to completion.

It would be well again to point out that individuals are living longer than in any former period. Some beneficial influences are taking place within the body which enable the cells to continue some 25 years longer now than a short half-century ago. Changes for the protection of important key organs in the body are in process.

Just how far the degeneration of cells may go and yet be reversible is not as yet proven. We do know, for example, that in the pancreas a state of exhaustion may produce temporary diabetes. This can be shown by taking an experimental animal, loading its blood with sugar so that the secretory function of the cells which manufacture insulin is completely exhausted and the pancreas can no longer carry on. This effect may likewise be produced by the use of certain chemicals, such as alloxan. When the harmful ingredient has been eliminated the cells renew themselves and then return to normal. Here is the key to long life; it resides within the cells of the body and the ability of cells and tissues to renew themselves under optimum conditions. The better the state of nutrition, the maintenance of homeostasis of the blood stream, and tissue fluids, with avoidance of overloading and exhaustion, the longer will the cells and the longer will the individual live.

THE JOURNEY BEYOND SIXTY-FIVE

While there is evidence that the majority of adults may reach the sixties in remarkably good physical health, what happens beyond the date line when vast numbers are consigned to the inactive list will depend in a great measure on the broad base of interest and variety of avocations cultivated in the so-called prime years of life.

The practice of discarding human beings at 65 when many are performing their most valuable service, is one of the wasteful practices of our society. The challenge of retirement, to be effectively met, will require wise planning, guidance, and continued support for the years ahead. With healthy added years, which might be rendered sterile of social significance, a financial burden may appear that might well threaten the solvency of the national treasury. An even more unfortunate aspect is the increasing dependency of large numbers of healthy men and women who, for their own welfare and happiness, should be active participants and contributors to the social welfare.

We are living in an exciting and unstable era. Extension of the human life span, with the continued growth and maturation of individuals in the later years, may result in a more mature and more stable society. To contribute our measure by preserving the health and vitality of our patients is a worthy objective of modern medicine.

TREATMENT OF MANDIBULAR FACIAL DYSOSTOSIS*

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Among the many congenital malformations of the face there is a peculiar complex of symptoms which has been described as a new clinical entity by Franceschetti and Zwahlen (1944) and further defined by Franceschetti and Klein in 1949. The term mandibular facial dysostosis was proposed for a syndrome which—if fully developed—is characterized by the following symptoms (Fig. 1): Bird-like physiognomy, obliquity of the lid axes (anti-mongoloid position), S-shaped lower lids with coloboma in the lateral part, absence of the zygomatic arches, hypoplasia of the maxilla and mandible, malocclusion, cleft palate, microtia with blind auditory canals, middle-ear deafness, agenesis of the muscles of the second visceral arch and abnormal growth of hair. Since these patients may otherwise be healthy and intelligent, the improvement of the aesthetic aspect and the relief from the functional troubles becomes a challenge to plastic surgeons. The signs vary from the full-blown form described above to *formes frustes* (occasionally unilateral) which may be much more common than the 36 cases hitherto described.

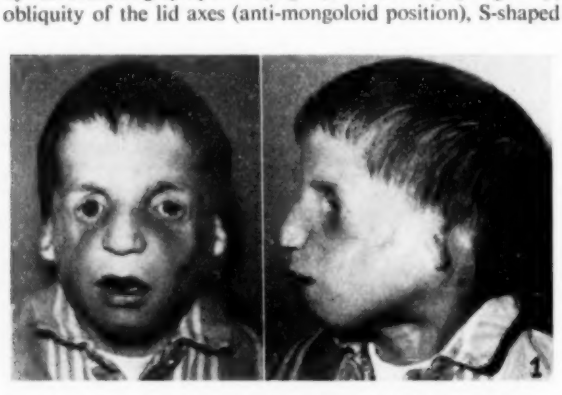


Fig. 1. A typical case of mandibular facial dysostosis.

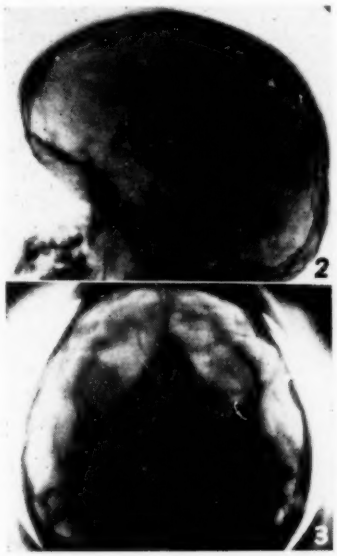
* A paper presented at the South African Medical Congress, Durban, September 1957.

Dysostosis mandibulo-facialis is understood to be an embryopathy occurring towards the 7th week of embryonic life which causes a derangement of growth and a delayed ossification of the bones deriving from the first visceral arch. As reported by Franceschetti and Klein the gene mutation may become hereditary in an irregular way. One patient was operated on by Kilner in 1943 and two cases by S. Roselli in Milan. A satisfactory improvement of the lower-lid position by a pedicle graft from the upper lid and by a cartilage transplant to the infraorbital margin has been achieved as well as a correction of the micrognathia with bone grafts.

CASE REPORT

At Innsbruck University Hospital two typical cases of Franceschetti's disease were admitted in 1953. The first, a boy of 9 years with all the signs described above, showed a mental age of 3 years, and was therefore not subjected to surgery (Fig. 1).

The second, a highly intelligent girl of 13, had been 8 years at school and had obtained excellent marks in arithmetic, she came from a lonely valley in Carinthia. Although this malformation is known to be of genetic origin, the ancestry of this girl traced through 4 generations showed no suspicious manifestations whatsoever. The mother was healthy throughout the pregnancy but claimed a heavy mental stress at the beginning of that pregnancy. The girl is the youngest of 2 good-looking sisters and 2 brothers. When she grew older the deformity became much more apparent. She suffered emotionally from her strange appearance and desired an improvement of her physical state at all risks. Comparing her unhappy face with those of her pretty older sisters we were heavily touched by the tragedy of that child. X-rays revealed a rather small sella turcica, the complete absence of the zygomatic arches, the typical hypoplasia of the facial



Figs. 2 *and* 3. X-ray of skull showing small sella turcica, the absence of zygomatic arches and the hypoplasia of the facial bones.

bones, especially of the lower orbit (Figs. 2 and 3). The mastoid processes were under-developed and there was no pneumatization in the os temporale. There was a wide cleft palate and the speech was so poor that it could be understood only by her mother. When I first discussed the case with the late Professor Breitner he agreed that even a minor improvement would justify the operative risks, the suffering and the scars.

It was decided to win the girl's confidence first by an improvement of her appearance and to leave the more troublesome closure of the palate toward the end of the reconstruction programme.

As suggested by Kilner in 1943, we first made a support for the cheeks and lower lids and filled the depression in the region of the zygomatic arches and lower orbit with diced cartilage. We did not build the infra-orbital margin and the zygomatic arch with a single solid piece of cartilage because in earlier cases we have seen such grafts in this region absorbed within a few years. Large parts from the costal margins of both sides had to be cut and were diced with a knife to 2-mm. cubes. A mould of stent and negatives of plaster were prepared the day before and these kept the mass of small chips in the proper place and shape for 10 days.

The next step was the implantation of a fat-dermograft which was taken from the hips. The new cheeks gave the child some happiness, changed her whole personality and made her a most confident and untiring plastic patient.

When Sir Harold Gillies visited Innsbruck on a lecture tour in 1954 I asked his opinion about this case and he kindly per-

Fig. 4. Diced cartilage in situ, 2 years after implantation, showing that the cartilage is growing.

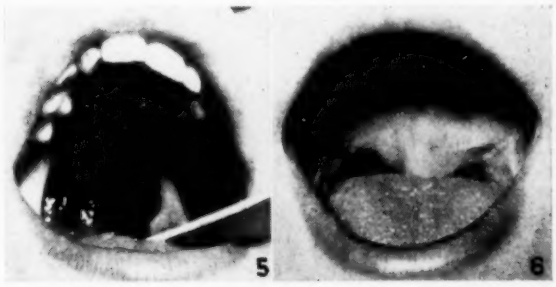


Fig. 5. Pre-operative wide cleft palate.
Fig. 6. Two lateral openings after hyper-pharyngo-hyperplasty.

Fig. 7. Series of pictures showing, from left to right, the pre- and post-operative appearance of the patient.

formed a nose reduction. He suggested building the missing lower lids from free post-auricular grafts. This graft took perfectly but, because of the missing auricle, the post-auricular skin was not large enough to keep the outer angle of the lid in the correct position. Therefore an extra flap from the upper lid, as recommended by Kilner, had to be transposed to the lower-lid margin. The coloboma and the entropion finally disappeared when a mucosal graft from the mouth was inserted into the conjunctival sac. During this operation a biopsy was taken from the diced cartilage implanted 2 years before. The clinical impression that these transplants had enlarged was confirmed by the histological picture (Fig. 4). This juvenile cartilage did not only survive, therefore, but also had retained some ability to grow (Peer, 1936).

Hearing could hardly be improved because of the underdeveloped auditory bones. We did not attempt to open the auditory canal. The small skin folds which had no cartilageous support were stretched out and formed into a lobe of an ear on both sides. At the same time a tube pedicle was raised in the left inguinal region and transported to the palate *via* the left wrist. The speech was much improved after the closure of the palate but the palate was immobile and too short to reach the pharyngeal wall. Therefore a velo-pharyngo-plasty with two lateral openings was performed (Figs. 5 and 6). Because of shrinkage, the apertures became too large and the resulting speech is not perfectly satisfactory. The endurance of this patient was rewarded by physical improvement which in spite of the scars at the end was surpassed by an astonishing mental gain. The patient who never would smile before became a self-confident and happy-looking girl with her new physiognomy and understandable speech (Fig. 7). This spring she left home to take a job in town.

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MY ATTACKS OF ACUTE PORPHYRIA

BY A DOCTOR

Towards the end of 1938 I was practising in a small place in the North Western part of the Cape Province called Deben. I had to undertake long trips to patients throughout the Kalahari desert, the hottest part of South Africa. I was overworked and developed an acute sinus infection. The first sulphonamide tablets had just come on the market and I took 6 tablets of 'M & B 693'.

The next day I had to go to bed feeling very ill; I was nauseous and vomited profusely. A sense of weakness overtook me, and I found it difficult to climb out of bed. I had a dull ache in the back especially in the lumbar and sacral areas, which gradually got worse. I vomited repeatedly and could not take nourishment, not even fluids.

On the 3rd day I became very emotional and started shouting at everybody; unprovoked crying also occurred. By this time I could not think rationally and developed delusions of persecution. I thought I was being poisoned.

By the 8th day I developed severe pains with pins-and-needles over the lower abdomen and lumbar and sacral area, also down both lower limbs to just above the knees. Both upper limbs were also affected. Paralysis of both upper and lower limbs now started; it was of a peripheral neuritis type. I could not sit up in bed and could not help myself in any way. By this time I was in a semi-conscious state and became utterly helpless. My mind got worse. I started fighting everybody.

I was given Sedobrol and other sedatives and also received injections but cannot remember what other drugs I received. The only thing that relieved my pains was brandy. I took Martell's night and day in full tots. This probably made me worse.

On the 14th day of my illness I was taken up to Johannesburg Hospital where my condition was diagnosed as multiple peripheral neuritis, caused by the 6 tablets of sulphonamide. I was given plenty of fluids and N.A.B. injections.

I lost weight progressively and only weighed 110 lb. on being discharged from hospital, my normal weight being 230 lb. I was kept in hospital for 2 months and by that time showed a marked wasting of the muscles of both upper and lower limbs. The shoulder girdles were especially affected. By this time the severe pains began to subside and the mental state cleared up. All that was left now after 2½ months' illness was the parasthesia of the affected areas.

It took me another month to regain the use of my limbs, and the muscles were still weak. The pins-and-needles and numb feeling took almost 1 year to subside completely. Fits of depression cropped up but this also cleared up gradually. I can say that it took me a whole year before I really felt well.

The diagnosis of porphyria was made only after the death of my elder brother, who died as a result of an acute attack of porphyria in 1949, at the age of 46. His attack was brought on by barbiturates.

SECOND ATTACK OF ACUTE PORPHYRIA

I enjoyed good health from 1940 to September 1956.

On 20 September, I was again overworked and developed, as in 1938, an acute sinus infection. For the headaches and insomnia I took 6 barbitone tablets over a period of 2 days.

This time the acute attack started with a dull ache low down in the back. After a day I had to go to bed with a feeling of weakness in both upper and lower limbs. Then my mind began to be affected, I could not think clearly and again I became very despondent and irritable. I started to vomit.

Late on the night of 21 September 1956 I was put in a car and driven down to St. Joseph's Hospital in Port Elizabeth, where I was under the care of Dr. Geoffrey Dean. I was told that I got very restless on the trip down and vomited repeatedly; and for about 14 days I could not remember anything that had happened.

In hospital I woke up 14 days after being admitted. I felt suffocated and struggled to get out of bed, shouting for the police. I was completely disorientated for time and place and thought I was in prison. I had to get out of the place; 'They have poisoned me and are scheming to kill me,' kept coming into my mind.

It took some days more before my mental state improved. Then the pains started again—severe burning sensation and parasthesias round the lower trunk down to the knees and in the arms and shoulder girdles. The only relief I got was from hot-water sponging. I became weaker and lost weight until I could not get out of bed. Both shoulders were very weak; also both rectus muscles. Pins-and-needles troubled me in all painful areas. My scalp and teeth were sensitive to temperature changes.

With special exercise the paralysis of the muscles improved to such an extent that I could get out of bed after 6 weeks. My appetite improved.

I have been out of hospital for a month now and am much stronger, but the affected muscles are still weak. There is still numbness and pins-and-needles in the lower abdomen and saddle area. It gets worse after standing for some time, and also when I get upset. The slightest remark that upsets me brings on the pains and numbness.

Although I feel much better and have recovered mentally I still get fits of depression and irritability. Kindness and sympathy is a very great help. I am convinced that it was the patience and kindness of the doctors and sisters that helped me to recover from this attack brought on by 6 tablets which I took because I had become used to regarding myself as being in good health. I never experienced abdominal pains—severe constipation, yes, and faeces hard and very difficult to pass on account of weakness. I never had any signs and symptoms of an acute abdomen, although other cases of porphyria do.

I shall never take sulphonamides or barbiturates again!

ABSTRACT : UITTREKSEL

SOME BIOCHEMICAL INVESTIGATIONS ON KWASHIORKOR*

H. E. SCHENDEL AND J. D. L. HANSEN

From the Department of Medicine, University of Cape Town, and Red Cross War Memorial Children's Hospital, Cape Town

The criteria which are used to establish the degree of protein depletion and rate of repletion in man are under constant review. Such criteria are obviously of great value in testing treatment regimes or formulating preventative diets for kwashiorkor (protein malnutrition). Hence investigations of specific biochemical constituents have been undertaken in this Department in an effort to define some of the metabolic characteristics of this syndrome and so to aid in the definition of these criteria.

Total serum cholesterol: its use in clinical assessment and prognosis

Total serum cholesterol in 48 cases of kwashiorkor was shown to differ significantly from the mean of 8 normal children of a similar age grouping. This low serum-cholesterol level on admission, however, did not seem to bear any prognostic significance. In those cases whose clinical improvement was satisfactory, serum cholesterol rose significantly to supranormal levels followed by a slight fall to more normal levels after 4-6 weeks of treatment. Conversely, the rise of serum cholesterol in those cases which did not respond to a prescribed treatment was not significant until therapy was modified. Likewise, serum cholesterol failed to rise in 2 deaths which were studied. A fall to near admission levels after a period of rising serum cholesterol was associated with unsatisfactory dietary formulae or complications such as diarrhoea, concurrent infection, anorexia, etc. Cholesterol rose again with either a change in formula or supportive therapy. Since the diets used in these studies were fat- and cholesterol-free, it would appear that serum-cholesterol levels are an accurate index of clinical response.

The comparison of serum cholesterol and serum albumin, which has been our objective biochemical index of clinical improvement, is difficult, although there is some indication that the latter is somewhat slower and delayed.

The use of serum-cholesterol levels as an index of clinical complication would appear to be superior during the first critical 2-4 weeks of treatment, since serum albumen does not show a fall during the onset of complications.

Amino acids in the urine

This study was undertaken in an effort to test whether specific deficiencies in amino-acids exist in kwashiorkor. The urinary excretion of 24 amino acids was partitioned and quantitated in normal and kwashiorkor children by the column chromatographic method. Such data in normal children have been expressed recently by Huisman as a function of body weight per day yielding a relatively constant output for children aged between 6 months and 13 years over a broad range of protein intake. Holt *et al.* prefer to express such excretory data per g. of creatinine excreted per day.

1. *Aminoaciduria on natural diets.* There appears to be an increased aminoaciduria in kwashiorkor, whether the data are expressed as a function of body weight or of creatinine excretion. This increased excretion amounted to roughly 3 and 5 times normal, respectively, following a milk feed, and was reduced by about a third after a short period of skim-milk treatment. This excretion does not appear to be due to increases in any particular acid but rather to be the result of slight increases in at least 17 amino acids. While such an observation may be of value as an indication of metabolic dysfunction, it is probably of little significance in the economy of nutrient utilization.

2. *Aminoaciduria on synthetic diets.* We also studied the effect of formulae containing synthetic amino acids on urinary excretion. One of these formulae, containing the 18 acids of casein, was compared with milk in a normal child. Whereas this child excreted 0·3% of his intake of the milk amino acids, he excreted 19·75% of his intake of the synthetic amino acids. This is due presumably, to the fact that the body does not naturally receive a completely hydrolysed protein meal, and secondly because 9 of the acids were present in the formula as the DL isomers. The mean excretion of such acids was roughly 150 times that of comparable acids excreted after the milk diet, where the amino acids would be present as the natural L isomers. This increased aminoaciduria was also observed in 4 cases of kwashiorkor and shown to be highly significant when compared with their excretion following a milk diet.

* Abstract of paper presented at a meeting of the University of Cape Town Research Forum held at Groote Schuur Hospital, Cape Town, on 6 November 1957. The authors wish to acknowledge the assistance of Dr. A. Antonis, who was responsible for all of the analytical measurements.

PRESENTATIONS BY THE CAPE WESTERN BRANCH

At the monthly meeting of the Cape Western Branch of the Medical Association of South Africa held on 28 November 1957, tribute was paid in the form of illuminated addresses to three Cape Town residents outside the medical profession, namely Mr. A. M. Filmer, Mr. G. M. Guthrie and Mr. E. C. Blomkamp, in recognition of distinguished services to the medical profession and the public. Mr. Filmer took a leading part in the foundation of the United Banks Medical Aid Society and the South African system of medical aid societies, and Mr. Guthrie and Mr. Blomkamp were pioneers in the establishment of the Western Blood Transfusion Service.

MR. A. M. FILMER

Mr. Filmer became the Secretary of the United Banks Medical Aid Society in 1922 and was responsible for a significant propaganda drive which strengthened the organization, and for compiling the actuarial foundation which ensured its success. He left his Bank to become the full-time Secretary of the Society in 1931 and initiated the first tariff negotiations in 1932. In 1942 the first Council of Medical Aid Societies met under his aegis and this body has now grown to form the present Advisory Council of Medical Aid Societies. He retired from active work in 1945.

The text of the illuminated address presented to Mr. Filmer is as follows:

> 'Archibald Macro Filmer. The Cape Western Branch of the Medical Association of South Africa placed on record its gratitude and appreciation for the pioneer work done by you in the creation of the United Banks Medical Aid Society and the subsequent expansion of the scope of this organization, which became the pattern for the many other medical aid societies which are now recognised by the Medical Association of South Africa. It congratulates you on your achievement and wishes you great happiness in the contemplation of the fruits of your labour.'

MR. G. M. GUTHRIE

Mr. Guthrie had been a foundation member of the original Toc H Committee which formed the Cape Peninsula Blood Transfusion Service in 1938. He became the Honorary Secretary from December 1939 to September 1952, when the service appointed a full-time Secretary. He remained a member of the Management Com-

mittee of the Service until December, 1955, when he resigned owing to pressure of work in his private business.

The text of the illuminated address presented to Mr. Guthrie is as follows:

'The Cape Western Branch of the Medical Association of South Africa records its appreciation of your pioneering work and distinguished service in the founding of the Blood Transfusion Service in the Cape of Good Hope. In their expression of gratitude we join the men, women and children whose lives you have helped to save.'

MR. E. C. BLOMKAMP

Mr. Blomkamp enrolled as a donor in 1938 and by 1957 he had donated no less than 55 pints of blood. In July 1949 he was elected Chairman of the Committee in succession to the late Prof. van den Ende, and he has held this position every year since, having been elected unanimously at each Annual General Meeting of the Service.

The text of the illuminated address presented to Mr. Blomkamp is as follows:

'The Cape Western Branch of the Medical Association of South Africa places on record its appreciation of your distinguished service in establishing the Blood Transfusion Service in the Cape of Good Hope. In their expression of gratitude we join the men, women and children whose lives you have helped to save.'

Before the meeting Messrs. Filmer, Guthrie and Blomkamp were entertained to dinner by members of the Branch Council. Following this, at the Branch Meeting the Chairman of the Branch, Mr. G. A. Currie, outlined the humanitarian service of their guests, which had greatly contributed to the present standard of medical practice. He then presented to each an illuminated address, the terms of which are set out above.

THE BENEVOLENT FUND : DIE LIEFDADIGHEIDSFONDS

The following contributions to the Benevolent Fund during October and November 1957, are gratefully acknowledged.

Votive Cards in memory of:

Mr. W. R. Hewett *by* Dr. P. A. Smuts.
Mr. T. J. Howell *by* Dr. L. Staz.
Dr. F. V. Werdmuller *by* Dr. N. H. Kestell, Dr. and Mrs. R. Geerling, Drs. C. Becker, F. Durham and W. Mostert.
Mrs. A. Cheyne *by* Dr. H. E. Brown, Dr. and Mrs. D. S. Huskisson, Dr. and Mrs. H. A. Kalley, Dr. and Mrs. D. H. Biggs, Dr. and Mrs. R. B. Peckham, The Head Male Nurse and Male Nursing Staff of Town Hill Hospital, Pietermaritzburg.
Mrs. E. V. Downing *by* Dr. G. M. Malan.
Mr. C. Silberman *by* Drs. M. Feldman, C. B. Jeppe, F. Frankel and B. Chesler.
Mr. Moss *by* Drs. Cunard and Alexander.

Total amounts received from Votive Cards £22 16s. 0d.

Services Rendered to:

Dr. K. B. Vetten *by* Dr. Monte Jackson.
Prudential Assurance Co. *by* Dr. T. Macleod.
Dr. G. R. F. Masey *by* Drs. D. A. Eddington, L. Mundy, R. Elsdon-Dew and J. Drummond.
Mrs. I. Friedman *by* Drs. M. Jackson and E. Samuel.
Mrs. S. H. Thaker *by* Drs. D. S. Moll and Partner, Drs. R. W. Cheetham and M. G. H. Mayat.
Mrs. Grundlingh, mother of Dr. C. M. Grundlingh *by* Drs. W. F. Lawrence, F. Ziady and R. W. W. Schultz.
Dr. J. Walker *by* Dr. R. J. McMahon.
Mrs. Taylor and Mr. A. Taylor *by* Mr. Butcher and Mr. Large.
Dr. F. V. Werdmuller *by* Drs. Fatti and Marchand, A. L. Agranat, M. Weinbren, Cones and Henning, Mr. Fouche and others.
Son of Dr. G. de V. Theron *by* Drs. H. Bell, J. C. S. Steytler and E. v. Hoogstraten.

Total amount received from Services Rendered £110 2s. 0d.

Donations:

Drs. Bodemer, E. E. Schulenburg, P. J. Fischer, du Toit, M. T. S. Vogel, C. J. Niehaus, T. Meyer, S. Goldberg, H. J. F. Davis, H. Hallat, Kritzinger, A. B. Scholtz, M. Viljoen, Bruwer, Roeloffze, Ata, H. J. Scholtz, W. J. Naude, de Villiers, A. B. Donchin, J. B. van Zyl, D. Serfontein, B. T. Muller, W. Wilkens, Saacks, C. Friidman, Distriksgeneesheer, P. H. Harley, F. D. Pascoe, E. B. Moffat, Morrison and van Zyl, Riekert, Sievers and Campher, M. A. Lloyd, H. J. van Rensburg, J. Volker, R. P. Stafford, Schultz and Snyman, S. M. van der Merwe, P. de V. C. Perkins, P. C. St. L. Grenfill, C. Schwartz, S. Klein, J. S. Coetzee, Niewoudt and Gilliland, F. J. Nel, P. J. van der Westhuizen, J. L. Mans, J. G. B. Maree, S. J. Swiegelaar, A. Brodie, A. J. Louw, J. C. de V. Hutchinson, Gilliland, Koornhof, Joyce and du Preez, D. J. Nel, Hartley and Williams, J. Gordon, Spiro, Slabbert, Petzer and Jacobsen, H. F. Möller, A. L. G. Thomson, E. D. Lyons, R. B. Bosch, G. F. C. Troskie, A. S. Nethercott, C. H. C. Visser, G. de V. Morrison, T. H. Crouch, P. B. de Klerk, B. L. Fryer, M. W. Mills, G. E. Dalton, J. T. Roux, F. P. Jooste, A. M. le Roux, P. W. A. Pieterse.

Total £357 0s. 0d.

	£	s.	d.
Urological Group	5	5	0
Anonymous	2	2	0
By legacy Estate late Dr. C. P. Bester	100	0	0
Collected from Members attending 41st S.A. Medical Congress	51	2	9
St. Stephen's Church	14	11	1
Dr. B. Morris	3	0	0

Total amount received from Donations £533 0s. 10d.

Grand Total £665 18s. 10d.

NATIONAL GENERAL PRACTITIONERS' GROUP: GRIQUALAND WEST SUB-GROUP

The Annual General Meeting of the Griqualand West Sub-group of the National General Practitioners' Group was held at Kimberley on 7 November 1957. Dr. J. E. Vaughan-Jones took the chair, and 11 members were present.

The annual report by the chairman and secretary of the National Group for the last 2 years was read. Dr. S. Perel observed that there seemed to be a sad lack of support by sub-groups, and reading between the lines he thought the National Secretary was raising the question whether the Group should continue in being or not. Drs. G. T. Tandy, J. Kieger and J. Kretzmar also spoke on this question and expressed the view that the Group should continue as a body through which general practitioners could state their views. It was suggested that a letter should be written to the National Secretary promising the cooperation of the sub-group and pointing out that in Kimberley they had 100% membership. The National Secretary should be asked to give ample notice of meetings of the executive so that their representative might be present.

Dr. Perel pointed out that the new Medical Aid Tariff included increases for consultations, but only so far as specialists were concerned. Dr. Kretzmar read a report from the De Beers Benefit Society which implied that general practitioners' fees had increased by 20% for consultations as well as for operations, which was not the case. It was decided to bring this matter to the notice of the Medical Association.

A letter from Dr. S. Levy, the new National Secretary, was read, in which he desired to know whether the sub-group wished to claim the 50% of the subscription fees, namely £10, to which it was entitled. It was decided that the National Executive should retain this money. It was agreed that the National General Practitioners' group should organize clinical meetings to which specialists should also be invited. It was also agreed that the group should hold meetings on clinical subjects at the South African Medical Congress. It was decided to ascertain the number of general practitioners who attended the congress and, if there was a fair representation, to press for such meetings.

Election of Office Bearers. The present committee and office bearers were elected *en bloc* for the ensuing year: viz. *Chairman*, Dr. J. E. Vaughan-Jones; *Secretary/Treasurer*, Dr. U. F. McKenzie; *Member of the National Executive Committee*, Dr. G. T. Tandy; *Elected Members*, Drs. G. T. Tandy, J. P. Collins (or D. A. W. Keys), S. Perel, J. Botha, J. Kieser and I. Hammer.

THE SOUTH AFRICAN JOURNAL OF LABORATORY AND CLINICAL MEDICINE

In the Current (December 1957) issue of the *South African Journal of Laboratory and Clinical Medicine*, the following articles appear:

A Rational Approach to the Surgical Treatment of Duodenal Ileus, by J. H. Louw, Ch.M., B. Sender, F.R.C.S. (Edin.) and B. Shandling, F.R.C.S.

Problems arising during Induced Hypotension in Anaesthesia, by Beric Jackson, M.B., M.R.C.S., D.A. (R.C.P.&S. Eng.).

Annular Pancreas, by P. G. Large, M.S. (Lond.), F.R.C.S. (Eng.).

Vitamin B12 in the Megaloblastic Anaemias, by E. B. Adams and P. F. V. Forbes.

Die Inplanting van die M. Pectoralis Minor in die Bantu en sy Moontlike Invloed op die Stabiliteit van die Skouergewrig, deur L. M. Jonck, M.Sc., B.Ch.D. (Pret.).

The Erythrocyte Sedimentation Rate in Kwashiorkor in Cape Coloured Children, by Peter V. Suckling, M.D. (Lond.), M.R.C.P., D.C.H.

Determination of Faecal Bile Acids, by Barry Lewis, M.B., Ch.B., Ph.D., A.R.I.C.

A Comparative Study of Two Methods for the Determination of Serum Cholesterol, by Z. M. Smit, M.Sc. and S. Wehmeyer, M.Sc.

Neurosyphilis in the Bantu Male, by J. D. Woods, M.B. (Rand.), F.R.F.P.S., M.R.C.P.

The Journal, which is published quarterly by the South African Medical Association, is available from the Association's office, 35 Wale Street, Cape Town, at an annual subscription of 25s. or at 7s. 6d. per issue.

UNIVERSITY OF CAPE TOWN : EXAMINATION RESULTS : DECEMBER 1957

Following is the schedule of examination results at the University of Cape Town, December 1957:

Degree of M.D.

R. G. Hendrickse: (Subject of Thesis: 'Sickle Cell Anaemia, Sickle Cell Haemoglobin C. Disease, and Homozygous Haemoglobin C. Disease.')

H. V. F. Jordaan: (Subject of Thesis: 'Persistent Occipito-Posterior Positions'.)

Degree of M.Med (Anaesthesia)

C. G. G. du Plessis, M. Friedland, J. A. Pretorius.

Degree of M.Med. (O. & G.)

H. J. H. Claassens.

Degree of M.Med (Pathology)

W. B. Becker, N. Woolf.

Degree of M.Med. (Surgery)

W. M. Roberts.

Degree of M.B., Ch.B.

I. Abrahams.
A. Aronstam.
R. A. Asherson.
T. Augoustides.
Miss J. E. Bain.
S. M. Berger.
M. C. Berman.
H. Buchinsky.
J. S. Chadwick.
D. H. J. de Groot.*
H. A. de Groot.
E. C. de Kock.
J. S. de Wet.
A. M. Dhoodhat.
L. M. Epstein.
Miss D. J. Esterhuyse.
M. J. Feitelberg.
A. A. Forder.
A. M. Gardee.
I. H. Glaun.
C. Gobregts.
J. A. D. Goodenough.
M. S. Gotsman.†
F. Harris.
V. C. Harrison.
J. A. Haslett.
M. A. Hassan.
I. Immerman.
M. T. Jamie.
H. B. Joffe.
R. G. Jones.
C. D. Karabus.*
J. Katz.
A. Landra.
J. T. Laubscher.
G. L. Leader.
L. Leve.
M. H. Lipper.
C. H. Lowe.
Miss S. A. MacKenzie.
W. Maisel.
B. A. Michaelides.
Miss F. Movsowitz.
L. Movsowitz.
F. H. P. Mroczkowski.
Miss M. H. Nossel.
Miss A. M. Oosthuysen.
I. Pilowsky.
W. S. Pretorius.
Shaik A. G. M. Randeree.
B. Rogoff.
Miss N. P. Saxe.
D. J. Schoeman.
A. v. W. Scribante.
A. R. Sedick.
G. S. Sennett.
M. G. Shelton.
R. P. Smithson.
F. H. N. Spracklen.‡
E. Swart.
C. F. Truter.
E. U. van der Merwe.
C. P. de R. van Gend.
G. E. Wallat.*
Miss J. D. L. Waynik.
Miss H. N. E. Wright.

* Distinction in first professional examination.

† Distinction in first and second professional examinations and degree with second-class honours.

‡ Distinction in first professional examination and degree with second-class honours.

UNIVERSITY OF THE WITWATERSRAND : DIPLOMAS ETC. CONFERRED

At the graduation ceremony of the University of the Witwatersrand the following diplomas in the Faculty of Medicine were conferred:

Diploma in Anaesthetics

Cohen, David.
Cullinan, Reginald Neville.
Dickson, Derek Newton.
Marcus, Elazer.
Ordman, Joyce.
Per, Solomon Samuel.
Pitcher, John Sydney Isemonger.
Reyneke, Josias Johannes.
Rollnick, Eugene.

Diploma in Psychological Medicine

Becker, Arthur Leopold.
Freed, Louis Franklin.
Rabinovitz, Emanuel.

Diploma in Public Health

Holtzhausen, Gerard Holtzhausen.

Diploma in Tropical Medicine and Hygiene

Buchan, Rodney.
Peacock, Peter Norman Bligh.
Seligmann, Karl.
Smit, Pieter.
Smith, Alexander Haden.
Spencer, Ian Walter Frames.

Diploma in Medicine

Bosman, Anston Raymond.
Isaacs, Hyam.
Kramer, Sidney.
Seftel, Harry Cecil.

Diploma in Surgery

Kessler, Abraham.

Diploma in Obstetrics and Gynaecology

Herbst, Coenraad Frederick.
Orr, Ivan.
Quinlan, Desmond Kluge.
van der Wat, Jacobus Johannes Hendrik Botha.

Doctor of Medicine

Weinbren, Herschell Kenneth.

Part II of the Final Professional Examination for the degree of M.B., B.Ch. (old Regs.)

Costa, Adeline.

NEW PREPARATIONS AND APPLIANCES : NUWE PREPARATE EN TOESTELLE

LONGIFENE (UNION CHIMIQUE BELGE)

Longifene is 1 p.chlorbenzhydryl 4 (p.tertiobutylbenzyl piperazine) dihydrochloride. In the world literature it appears under the chemical names Buclizine. Histabutyzine, and U.C.B. 4445.

Indications. Longifene controls objective and subjective symptoms. It had already been shown to be effective in motion sickness and post-operative vomiting, so that it seemed likely that it might be equally efficacious in vomiting of pregnancy. In fact, Longifene was found to afford a complete symptomatic relief in 53% of the patients suffering from this condition, while 14% were much improved and 19% improved.

Dosage. It was found that a single dose of 50 mg. *nocte* gave a symptomatic relief in a number of cases. Out of 36 patients treated for excessive vomiting, 20 were managed under this dosage scheme. When the response was not satisfactory after 3 days, it was supplemented by 25 mg. *mane*.

Action. Longifene provides the advantage of prolonged action. In 70% of the patients, relief was maintained for 8-24 hours after a single dose. This means that the action of a bedtime dose will last through the night in most cases. Longifene is practically devoid of any side-effects.

Packing. Bottles of 25 scored tablets, each 25 mg.

Sole Distributors: Scherag (Pty.) Ltd., Johannesburg.

PASSING EVENTS : IN DIE VERBYGAAN

Dr. H. van der Meulen, M.D. (Amsterdam), has commenced practice as a skin specialist at 502 Medical Centre, Heerengracht, Cape Town. Telephones: rooms 30403, residence 63453.

Dr. H. van der Meulen, M.D. (Amsterdam), praktiseer as spesialis vir huidsiektes te Mediese Sentrum 502, Heerengracht, Kaapstad. Telefone: spreekkamers 30403, woning 63453.

* * *

Unie van Suid-Afrika. Departement van Gesondheid. Aangifte van ernstige epidemiese siektes en poliomiëlitis in die Unie gedurende die tydperk 22-28 November 1957.

Poliomiëlitis

	Bl.	*Nat.*	*Kl.*	*As.*	*Totaal*
Transvaal	3	–	–	–	3
Kaapprovinsie ..	5	–	1	–	6
Oranje-Vrystaat ..	–	–	–	–	–
Natal	2	–	–	–	2
Totaal ..	10	–	1	–	11

Pes, Pokkies, Tifuskoors: Geen.

Poliomiëlitis : Een (1) Blanke geval in die Kaapprovinsie, aangemeld in Nuusbrief No. 47 van 1957, is sedertdien as Nie-Poliomiëlitis gediagnoseer.

Union of South Africa. Department of Health. Notification of formidable epidemic diseases and poliomyelitis in the Union during the period 29 November to 5 December 1957.

Poliomyelitis

	Eur.	*Nat.*	*Col.*	*As.*	*Total*
Transvaal	3	1	–	–	4
Cape Province ..	1	2	3	–	6
Orange Free State	–	2	–	–	2
Natal	2	–	–	–	2
Totals	6	5	3	–	14

Plague, Smallpox: Nil

Typhus Fever. Cape Province:

Fifteen (15) Native cases, including five (5) deaths at Mtonjeni, St. Marks District.

Sixteen (16) Native cases, including one (1) death in the Glen Grey District.

Three (3) Native cases in the Ngqeleni District. All necessary precautions taken.

* * *

Dr. P. D. de Villiers, M.B., Ch.B. (Kaap), D.M.R.D. (R.C.P. & S., Eng.), F.F.R. (Lond.), voorheen van King Edward VIII Hospitaal, Durban, het kort gelede van 'n besoek aan Engeland teruggekeer en sluit in Januarie aan by drs. Samuel, Komins, Denny en Berezowski in konsulterend radiologiese praktyk te Lister-gebou 1, Johannesburg.

Dr. P. D. de Villiers, M.B., Ch.B. (Cape Town), D.M.R.D. (R.C.P. & S., Eng.), F.F.R. (Lond.), previously of King Edward VIII Hospital, Durban, has recently returned from a visit to England, and is joining Drs. Samuel, Komins, Denny and Berezowski in consultant radiological practice at 1 Lister Buildings, Johannesburg, in January.

REVIEWS OF BOOKS : BOEKRESENSIES

PSIGOTERAPIE

Kraepelin und Freud. Von Prof. Dr. K. Kolle. 88. Seiten, 8°, kartoniert DM 7.60. Stuttgart: Georg Thieme Verlag. 1957.

Inhalt: Vorwort. I. Die Probleme der Psychiatrie seit 1900. II. Emil Kraepelin. III. Sigmund Freud.

Ter herdenking aan die persoonlikheid en baanbrekerswerk van twee prominente figure in die psigiatrie, Kraepelin en Freud, beide in 1856 gebore, het dié boekie verskyn.

Uit die oorstelpende materiaal van die kliniese psigiatrie skep Kraepelin, skerpsinnig, die begrip van siekte-eenheid, sonder dementia praecox (hebefrenie, katatonie, dementia paranoïdes)

en die manies-depressiewe psigose af, en lê daarmee die blywende fundering van die psigiatriese siekteleer vas. Temidde van die gekompliseerde samehang van endogene en exogene, patogenetiese en patoplastiese faktore, het Kraepelin vorm en indeling aan die kliniese psigiatrie gegee, wat tot op hede nie deur eksistensiële of antropologiese opvattings, en nie deur psigosomatiese sindroomleer, aangetas kon word nie. Bowendien is ook die arbeidspsigologie die werk van Kraepelin.

Met behandeling van talle neurotiese pasiënte benader Freud die psigies verstoorde mens; sy intuïtiewe werkwyse het groot voordeel vir psigologie en patopsigologie ingehou met sy leer van die onbewuste in teenstelling met die bewuste deel van die persoonlikheid en die morele leiding-gewende super-ego, die leer van weerstand, verdringing, oordraging en sublimasie, van ‚vergissings' en psigosomatiese konversieverskynsels, van die ontwikkelingsfase van die kinderpsige en die betekenis van seksuele en ego-drange. Sy grondbeginsels van neurosebehandeling word nog altyd toegepas; droomontleding, vrye assosiasie en fantasie, analise en katarsis met herstel tot die volwaardige persoonlikheid. Bowendien het genetiese en kinderpsigologie en fenomenologie van psigotiese uitingsvorme veel gevorder.

Indien enig iemand Kraepelin se siektebeeld wil ontken of indien in Amerika al te oppervlakkige psigo-analitiese teorieë uitgespreek word, het die werk van die twee ondersoekers onvervangbare vrug gedra vir die wetenskaplike psigiatrie. Dit is goed om kennis te dra van hulle lewe wat hieraan gewy is.

A.B.

ADVICE FOR EXPECTANT MOTHERS

Advice to the Expectant Mother on the Care of her Health and that of her Child. Eleventh Edition. By F. J. Browne, M.D., D.Sc., F.R.C.S.E., F.R.C.O.G. and J. C. McClure Browne, B.Sc., M.B., B.S., F.R.C.S.E., F.R.C.O.G. Pp. 48. 1s. net + 3d. postage abroad. Edinburgh and London: E. & S. Livingstone Ltd. 1957.

Contents: Foreword. I. Benefits of Antenatal Care. II. Normal Pregnancy. III. Hygiene of Pregnancy. IV. Common Disorders of Pregnancy and their Treatment. V. Explanation of Pregnancy and Labour. VI. Preparations for Confinement. VII. Hints on Breast Feeding and Care of the Baby. Index.

This small book is a miniature text-book of midwifery for the pregnant mother. Antenatal care, normal pregnancy and its hygiene are well discussed and there are also chapters on the common disorders of pregnancy, normal labour and the care of the baby. It is an ideal book for the intelligent pregnant woman.

E.M.S.

MENTAL HEALTH PLANNING

Mental Health Planning for Social Action. By George S. Stevenson, M.D., Sc.D. Pp. x + 358. $6·50. New York: McGraw-Hill International Corporation. 1956.

Contents: Foreword. Preface. *Part I. Basic Considerations.* 1. Introduction—Meaning, Range, History, and Agencies. 2. Program Planning. *Part II. The Restoration of Mental Health.* 3. The Mentally Disordered. 4. State and Local Psychiatric Services. 5. Veteran's Psychiatric Services. 6. Private Psychiatry. 7. The U.S. Public Health Service and Narcotic Addiction. 8. Provisions for the Mentally Deficient. 10. The Legal Offender, the Police, and the Court. 11. The County Home and Mental Health of the Aged. 12. The Halfway House. 13. Outpatient Services and Residential Care of Mentally Ill Children. 14. Nonpsychiatric Agencies Serving the Deviant. *Part III. The Protection of Mental Health.* 15. Public Health and the Prevention of Mental Disorder. *Part IV. Elevation of Mental Health.* 16. Positive Mental Health. 17. The Home and Family. 18. Mental Health and the Church. 19. Mental Hygiene and the School. 20. Military Defence Services. 21. Mental Health and Work. 22. Mental Health and Recreation. *Part V. Special Considerations.* 23. Program Execution and Social Action. 24. World Mental Health. Visual Aids. Index.

The challenge of the author of this book is that there is more scientific knowledge and technique for dealing with mental illness than is now being used. He sets forth to show how we can use our current knowledge to a fuller extent and towards better results.

One of the distinctive features of our present civilisation is our dependence upon an active, vivid interaction between government, private agencies and individual voluntary activity, and it is to all these bodies that this book is addressed.

Dr. Stevenson discusses in detail the interesting problems of the restoration of mental health, the protection of mental health and the general elevation of mental health. Of particular interest is his examination of the mental hospital in a modern community, he makes constructive suggestions about how it can increase its contribution to mental health, he gives test questions for a hospital's success, tells why the clinic should come under the immediate authority of the mental hospital and suggests how the mental hospital can attract more personnel. He also shows how to use volunteer service for public education.

This book will offer many new perspectives to all those concerned with mental health.

A.P.B.

YEARBOOK OF ORTHOPAEDICS

Year Book of Orthopedics and Traumatic Surgery 1956–1957 *Series.* Edited by Edward L. Compere, M.D., F.A.C.S., F.I.C.S. Pp. 336. 208 Figures. $6·75. Chicago: Year Book Publishers, Inc. 1957.

Contents: Publishers Note: Introduction. Anatomy, Embryology, Physiology and Pathology. Congenital Deformities. The Epiphyses. Poliomyelitis. Osteomyelitis and Other Infections. Tumors, Cysts and Fibrodysplasia. Arthritis and Rheumatism. Fractures, Dislocations and Sprains. The Spine and Pelvis. The Neck, Shoulder and Arm. The Hand and Wrist. The Hip, Leg, Knee and Ankle. Amputations and Prostheses. Surgical and Diagnostic Technics. Instruments, Appliances and Bone Banks. Calcium and Phosphorus Metabolic Diseases of Bones. Geriatric Orthopedics. Miscellaneous.

The editor, Dr. Edward L. Compere, has maintained the high standard he has set in previous editions of the Year Book.

The format remains essentially the same. Once again the editorial comments which follow several of the summaries are terse and, in most cases, very appropriate. The introductory remarks from the editorial pen include a paragraph on non- or delayed union. The reviewer agrees with the statement which emphasizes the value of the use of autogenous cancellous grafts, when it is necessary to reduce, either an early or long-standing fracture, by open operation. He, however, feels that adequate immobilsation is still of the utmost importance in most fractures, and that this is a very important factor in the prevention of delayed or non union.

Several articles on the surgical management of recurrent dislocation of the shoulder are summarized. The editor favours the modified Magnuson procedure and feels that the Bankart lesion is based on a misconception.

For the first time a section on Geriatrics is included. Articles on osteoporosis in the aged are abstracted. This is a welcome addition to the Year Book.

This book provides a helpful review of the year's literature and is a handy reference for the busy practitioner. It is recommended to all who are concerned with this subject.

G.D.

MEDICAL ETHICS

Medical Ethics—A Guide to Students and Practitioners. Edited by Maurice Davidson, D.M. (Oxon.), F.R.C.P. (Lond.) Pp. viii + 165. 1 illustration. 20s. net. London: Lloyd-Luke (Medical Books) Ltd. 1957.

Contents: I. Introductory. II. The Structure and Functions of the General Medical Council. III. Professional Ethics. IV. The Doctor-Patient Relationship. V. The Doctor's Relationship to his professional Colleagues. VI. Medicine and the Church. VII. The Doctor, the Law, and the Police. VIII. The Doctor's Responsibility to his Family. IX. Contraception, Therapeutic Abortion, Sterilisation, and Artificial Insemination. X. What to tell the Gravely Ill Patient, or one who has to undergo a Serious Operation. XI. The Management of the Hopeless Case. XII. The Care of the Dying. XIII. The Practice of Experimental Medicine. XIV. The Hippocratic Oath.

The subject of Medical Ethics is one which is so often neglected in the teaching of medicine and so sparsely dealt with in the spate of medical literature, that it is a pleasure to welcome a new book on this important subject. This is doubly so when the contributors are men of the calibre of those who have assisted the editor of this important work.

The book is not a series of 'do this' and 'don't do that', but rather is a collection of addresses, some of which have been delivered in public and have previously appeared in print. They are all thus eminently readable and provide a satisfactory guide.

The contents show that a wide field is covered, and although some points of law are not quite the same in this country as in the United Kingdom, essentially there is no difference in the 'medical ethics' of the profession as it should and must be practised.

A.H.T.

STRESS

The Stress of Life. By Hans Selye, M.D. 18s. net. Pp. xx + 324. With illustrations and plates. Cape Town: Longmans, Green & Co. Limited. 1957.

Contents: Introduction. Preface. Acknowledgements. 1. Precursors of the stress concept. 2. My first glimpse of stress. 3. How to question nature. 4. The birth of the G.A.S. 5. Why did we need a blueprint for the dissection? 6. Inventory of assets (*a*) the facts. 7. Inventory of assets (*b*) the abstractions. 8. Inventory of assets (*c*) materials and techniques. 9. How does one dissect a biologic mechanism? 10. Results of the dissection. 11. Stress in a nutshell. 12. Stress and inflammation. 13. Synoptic view of the whole stress-mechanism. 14. The nature of adaptation. 15. Diseases of the kidney, the heart, and the blood vessels. 16. Inflammatory diseases. 17. Other diseases. 18. When scientists disagree. 19. The search for unification. 20. How could the stress concept lead to a more unified interpretation of biology and medicine? 21. Apologia for teleologic thought in biology and medicine. 22. Medical implications of the stress concept. 23. Psychosomatic implications. 24. Philosophic implications. 25. The road ahead. Glossary. Index.

'The Stress of Life' is a combination of a dissertation written for the layman upon Selye's neologism 'stress', the autobiography of the author, and a somewhat emotional plea for the recognition of his General Adaptation Syndrome as a contribution towards happier living.

In the penultimate chapter, and preceding the glossary of terms for the layman, the author says: 'All I can say is that the philosophy of stress has helped me enormously in achieving equanimity and a personally satisfactory programme for the way I want to go through life.' This type of testimony has much in common with the testimony of many reformers through the ages. The author does at least state: 'Only the future will tell us the significance of the General Adaptation Syndrome in the promotion of understanding of disease and in the relief of human suffering.'

The book presents some of the illustrations and facts that we are able to recognize as coming from the hand of Selye which have appeared in medical journals a decade or so ago, and which led him to propound his theory of stress in the genesis of symptoms and of disease. Some of his animal experiments are described in terms understandable to the layman.

His facts tend to be buried in a mass of so-called philosophical writing considered to have a bearing upon the theme of the importance of stress in everyday life.

Perhaps the book will help the layman to understand Selye's concept of stress and its effects. There are, however, in the opinion of the reviewer, many other philosophies, both spiritual and material, that through their practice tend to induce greater comfort and greater equanimity.

G.A.E.

CORRESPONDENCE : BRIEWERUBRIEK

DR. TOPPER TAKES A TURN, OR THE POWER OF FEAR

To the Editor: From the mists of antiquity, into the present time, throughout all the ages, the records of man reveal that the fear of death has been one of the most powerful influences for conversion to a religious creed.

Dr. Topper's account[1] is neither original nor particularly illuminating, and would be harmless, were it not for the fact that it carries an undignified attack on one of the Branch Councils of the Medical Association.

It is perhaps a pity that his revelation has not imbued him with some charitable feelings towards those of us who have served for many years on the various Branch Councils of the Association. I, personally, resent the slur which he casts on the deliberations of these Councils, and on their members, who give up their limited and precious free time in an attempt to help the profession as a whole.

L. Knox

166 Eagle Star House
West Street
Durban

5 December 1957.

1. '*Dr. Topper*' (1957): S. Afr. Med. J., **31,** 1175 (16 November).

BLOOD-ALCOHOL CALCULATIONS

To the Editor: In an article 'Blood-Alcohol Calculations made Easy'[1] published in the *Journal* of 20 July 1957, I explained a comparatively easy method for deriving the volume of liquor consumed. For this calculation the Widmark factor 'r' is assumed to be 0·67, while body-weight and blood-alcohol % of course should be known. However, it should be explained that blood-alcohol % might be stated either as a 'w/v' or 'w/w' value in the report of the analyst.

The denomination used is a choice of the analyst, depending whether or not he has thought fit to convert a w/v determination to a w/w value by making use of the average specific gravity figure for blood, viz. 1·056.

The original research of Widmark was carried out on weight alcohol per weight blood and in the widely accepted formula for calculating the weight of alcohol absorbed in the body tissues, viz. $A = p \times c \times r$, the 'c'—or blood-alcohol %—is a w/w value.

The derived formula in the above-mentioned article thus holds good if the blood-alcohol % is reported as a w/w value. However, should this be reported as a w/v value, then the following conversion should be made:

$$A^1 \text{ c.c.} = \text{p(lb.)} \times \frac{\text{blood-alcohol \%, w/v, } \times 3 \cdot 8}{1 \cdot 056}$$

$$= \text{p(lb.)} \times \text{blood-alcohol \%, w/v, } \times 3 \cdot 6.$$

Under these circumstances the values in Table I, p. 728, given under 'c.c. Alcohol absorbed in the body' should be diminished by approximately 5%.

P. K. van Gent

Government Chemical Laboratory
Port Elizabeth
4 December 1957

1. van Gent, P. K. (1957): S. Afr. Med. J., **31,** 728.

EFFECT OF MEGIMIDE ON THE RECOVERY TIME AFTER THIOPENTONE ANAESTHESIA

To the Editor: Drs. Harrison and Bull[1] are to be congratulated on their very excellent article on this subject. Their simple clinical trials and careful accurate observations show that the drug has no use in anaesthesia *per se*. Carefully used it is of value as an analeptic in barbiturate poisoning or possibly in rare instances of hypersensitivity to barbiturates. Repeated warning of the dangers of barbiturate overdosage in anaesthesia must surely render the administration of Megimide very exceptional.

Drs. Harrison and Bull have verified in clinical anaesthesia the work of Virtue and Kaster,[2] who tested the effect of Megimide on the sleeping time of dogs. These workers found the drug had some analeptic effect, but that it was certainly not a rapid antagonist to thiopentone.

The tendency to administer potent drugs in profound dosage in anaesthesia, followed by even more potent drugs with the doubtful hope of offsetting dangerous side-effects is to be deprecated. Whereas 'balanced anaesthesia', so described by Lundy, is physiological, injudicious polypharmacy is not only unnecessary, but is very often highly dangerous.

H. Grant-Whyte

232 King George V Avenue
Durban
5 December 1957

1. Harrison, G. G. and Bull, A. B. (1957): S. Afr. Med. J., **31,** 1225 (30 November).
2. Virtue, R. W. and Kaster, R. B. (1957): Anesthesiology, **18,** 686.